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THE Agricultural Situation

OCTOBER 1951

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Outlook Conference Begins October 29

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Outlook Highlights

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Hog-Slaughter Peak in December

Hog slaughter has been exceptionally large for early fall and will probably increase less rapidly than usual to a seasonal peak, which is expected in December.

Seasonal Rise in Cattle Slaughter

Fed cattle marketings from the Corn Belt were less than last year in August and September but are likely to hold up well and nearly equal last year in late October or early November. Large marketings of cattle from dry areas of Texas and Oklahoma have gone chiefly to pastures and feed lots elsewhere rather than to slaughter. Movement out of other range areas is late this year. Cattle slaughter, beginning in September to rise seasonally, was expected to pass a seasonal peak in October.

'51 Slaughter Smallest Since '43

Cattle slaughter for 1951 will likely total no more than 18 million head, even with increased marketings in the last three months. The 18-million estimate would be the smallest slaughter since 1943.

Milk Output Same as Year Ago

Milk production during the last quarter is expected to average about the same as a year earlier. Total production in '51 will be somewhere near 120 billion pounds compared with 120.6 billion pounds in '50.

Large Stocks of Dairy Products

Storage stocks of dairy products are now about at the seasonal peak. The accumulation of stocks this past summer was relatively large but total holdings are somewhat smaller than a year earlier when the USDA held large quantities of butter and cheese, later sold into domestic channels. Stocks of cream, September 1, normally stored

mainly for off-season ice cream production, were more than double those of a year earlier.

Feed Supplies Large, Needs Increase

Supplies in the 1951-52 marketing year of all feed concentrates, including the grains and byproduct feeds, were estimated in October at 176 million tons. This would be 4 percent below the record of the two preceding seasons, but much larger than in most years prior to '49. However, with live-stock numbers increasing, more feed probably will be used in the 1951-52 season than in any feeding season since the World War II peak.

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Outlook Conference Begins October 29

ECONOMISTS and home economists from State Agricultural Colleges will meet with Department specialists in the Jefferson Auditorium in Washington the week of October 29 to discuss farm economic problems and to take a look ahead at agriculture. From the States will come 150 State extension economists and workers in human nutrition and home economics. They will join Department workers and guest speakers to make up the 29th Annual Agricultural Outlook Conference.

Willard L. Thorp, Assistant Secretary of State for Foreign Economic Affairs, will discuss the world economic outlook and its effect on agriculture here at home. Secretary of Agriculture Charles F. Brannan will talk on emerging agricultural problems. Jesse W. Tapp of the Bank of America and O. C. Stine of the 20th Century Fund are other speakers. The Conference will be opened by M. L. Wilson, Director of Extension. Bureau of Agricultural Economics speakers will lead the discussions on the outlook for various commodities. Summaries of the outlook statements from this Conference will appear in a forthcoming issue of *The Agricultural Situation*.

Fertilizer Seen as Key to Further Production Increases

THE world-shaking events of the past year have speeded American agriculture across the threshold of a new era—an era which might be called the fertilizer era. For the present national emergency has pushed agriculture into a new phase of development in which the fertilizer industry will play its greatest role in history.

Because American agriculture cannot look to much new land and expanded farm acreages to satisfy the Nation's immediate growing needs for food and fiber, it must concentrate largely on making existing acreages produce more abundantly. It is in this connection that agriculture must depend as never before on the output of the fertilizer industry. For the application of larger quantities of fertilizer is the farming practice which provides one of the biggest opportunities for quickly increasing all agricultural production in behalf of the defense effort.

Fertilizer for Quick "Step Up"

The dependence of American agriculture on larger supplies of fertilizer comes as a surprise to most people and even to most farmers. A quick look at what has happened during the past 20 years, however, will help clear up the picture.

Although the total acreage of cropland was not increased significantly during the past 20 years, farmers boosted production to keep pace with our growing population through mechanization, improved crop varieties, better pest control, fertilization and improved cultural practices. While these improvements still have unexpended power for further expanding production, the present trend of increase is not enough to meet urgent emergency needs. We must speed up our rate of increase. Therefore we are looking on fertilizers as the key for accelerating immediate production and improving soils for sustained production at high levels.

Agriculture's ability to increase production in this manner, however, faces

a serious limitation. Fertilizer supplies for the 1952 crop year will not be large enough to meet the anticipated demand, even though the total tonnage of commercial plant nutrients probably will exceed the record supplies for the year ending June 30, 1951. Supplies in that year had jumped above those of the previous year by 25 percent more nitrogen, 8 percent more phosphoric acid and 28 percent more potash.

Big Supplies; More Needed

The total supply of nitrogen available for fertilizer purposes in 1952 is expected to exceed the 1951 supply by a small amount, but will not be sufficient to meet estimated requirements.

The immediate potash supply situation seems to be healthier in that the supply is expected to be at least 10 percent greater than in 1951. Even so, it is not likely to meet all demands in every section of the country.

Phosphate supplies in 1952 will be reduced, due to the tight sulfur and sulfuric acid supply situation. At the 1950-51 level of production, we require annually around 1,000,000 long tons of sulfur or its equivalent in sulfuric acid for superphosphate production. The tonnage available for this purpose in 1952 will probably be substantially less than the tonnage consumed during the past year.

Meeting the Shortage

The Department of Agriculture is attacking the shortage on two fronts. First, it is promoting the industrial developments needed to increase production of fertilizer materials. Second, it is promoting more efficient use of fertilizer materials within agriculture.

Our recommendations for nitrogen plant expansion are designed to balance the supply with the demand within the next 18 to 24 months. The increase provided by this program involves the construction of plants having a total annual capacity of 500,000 tons as soon as possible and a further increase thereafter to meet future needs.

With respect to potash, the Department is doing its utmost to see that the necessary materials and facilities are made available for the opening of new mines to add to the available supply of potash during 1952. Our efforts toward increasing phosphate supplies are directed toward encouraging the development of new sources of sulfur and sponsoring the installation of processes to treat phosphate rock with nitric acid. Such installations, however, are not expected to figure in the over-all supply of available phosphates in the immediate future.

In the second part of its program,

the Department is working for wider adaptation of better farming practices and techniques with respect to fertilizer which will do most to increase production. It is giving special attention to the grasslands program because grasslands present our greatest potential for increasing production.

These activities and others underline the importance of fertilizer to the future of American agriculture and the Nation. For the problems of the present fertilizer situation are problems which deal with the basic strength of the Nation.

Charles F. Brannan
Secretary of Agriculture

A Letter to Crop Reporters

THE OTHER DAY a fellow stopped me and asked if I wanted to take a chance for two bits. When I asked him what the chance was on he seemed befuddled and had to look back at his ticket book to see. It was on a hand-made shawl. Well, I'm not rocking-chair material yet. Until I am I don't need a shawl.

For me gambling is out. Some claim, of course, it is the citizen's right to lose his shirt if he wants to. Maybe so. But apparently some of our forebears began to run out of shirts when it came to guessing the out-turn on crops and decided something had to be done about it. That is why we have a crop reporting service today. This service is a joint deal. We take the information you crop reporters give us, put it together, analyze the results in light of past experience, and pass it back to help give you an idea of the over-all situation. This report can't be any better than the information you provide because what you give us is a big part of what we have to work with.

Surely, we are criticized even when we are right, but did you ever stop to think where you'd be if there wasn't an unbiased reporting service to keep a check on all the extraordinary rumors? We, on the Crop Reporting Board, have a very wholesome respect for our crop reporters. We believe that the opinions

of a hundred thousand or so farmers, scattered throughout the country, who report on crops each month constitute a formidable body* of information for anyone to argue with.

Yes, conditions change. And your opinions change as the crop progresses through the season. I was visiting with a friend of mine who had guessed back in August his corn would go around 85 bushels to the acre; but he didn't know that "Old Sol" was going to smile on him with such intensity, for the rest of the month, that by the first of September his field of corn would look as dry as late October.

Well, anyway, a fellow might take a two-bit chance on a hand-made shawl; and even if there is only one chance in a thousand of winning it, I suppose nobody could be hurt so very much one way or the other. For my part though, on a whole year's work, I would rather string along with the opinion of a hundred thousand crop reporters.

I honestly don't believe you can afford the luxury of tossing that crop schedule in the wastebasket. Fill it out and send it in. It will take only a few minutes of your time and it is pretty fair insurance against the wild rumors that get going every season.

S. R. Newell
Chairman, Crop Reporting Board, BAE

Keeping an Eye Out for Feed Supplies in the Northeast

THE NORTHEAST has long been the leading feed deficit region of the U. S., and there is little prospect that it will lose this position. Northeastern agriculture now uses some 2 million tons more feed concentrates per year than a decade ago but produces only about 600,000 tons more.

This has meant increased in-shippments of feed from other regions. Furthermore, most of the increased feed has gone to poultry. This makes the region more vulnerable than ever before to a national feed shortage, since the poultry feed is almost entirely concentrates.

Feed Needs Increase

Although the Nation's feed supply appears adequate for the coming year, shortages could develop later in view of the high demand for livestock products and the fact that our feed reserves are not large in relation to our heavy annual feed requirement. It may be pertinent therefore to review the current livestock-feed situation in the Northeast and to discuss some of the alternatives in case a feed shortage should develop.

As far as requirements for feed concentrates are concerned the Northeast apparently reached an all-time peak in 1950, exceeding the previous record reached during the latter years of World War II. Feed consumption in this region in 1951 probably will show a further increase to a total of over 13 million tons of concentrates. This compares with a total of about 11 million tons in 1941.

Especially for Poultry

Perhaps as significant as the increase in total feed requirements is the fact that most of the increase has gone to poultry. Requirements for feed concentrates have expanded only a little

for dairy cattle and have decreased for horses and sheep, but for poultry feed requirements are nearly 50 percent above the 1941 level. This spectacular increase in poultry resulted from expansion both in laying flocks and in broilers, but by far the largest percentage increase was in broilers.

Rise in Grain Crops, Small

Along with this sizable increase in feed consumption has been a smaller increase in feed grain production in the Northeast. In 1950 local production was about 4.3 million tons, as compared to 3.7 million tons in 1941. The increase was due primarily to higher yields rather than to larger acreages of the feed crops.

Steps To Take

In case the national feed situation should become tight at some future time, what could Northeastern farmers do to adjust to it? Dairy farmers would have several alternatives. Under most conditions they would probably find it more profitable to maintain their herds rather than to reduce them. This could be done in the short run by reducing the concentrates fed per cow, preferably by reducing heavily the quantity fed to low-producing cows. In the longer run dairymen could produce more home-grown feed, either roughage or grain. On most Northeast dairy farms, however, an increase in roughage would likely be more profitable than an increase in grain production.

Problem for Poultrymen

Poultry farmers, as suggested above, would have fewer alternatives. They depend almost exclusively on feed concentrates. Opportunities to reduce feeding rates are not good, and few of them have the land or other

resources for producing feed grain. They could not substitute roughage for concentrates to any large extent and their main adjustment could only be one of reducing numbers and production. Fortunately this could be done relatively quickly. At the same time, it would probably mean some financial loss to the producer, due to continuing overhead costs if for no other reason.

Potato Land to Grain?

One new possibility exists for increasing grain production in the Northeast. Some land formerly used for potatoes is now available for other use. This land could be used to produce grain and a part of it has already been put into grain crops. But we should not overestimate this possibility. Potato acreage in the region in 1951 is about 400,000 acres below the wartime peak. If all of this were put into grain and, assuming optimistically that it produced 1 ton of grain per acre, the result would be 0.4 million tons added to the feed supply. This would be of some significance but would only amount to about 3 percent of the total regional requirements for feed concentrates.

Increased Livestock More Likely

Actually it is very unlikely that the farmers who have reduced potato acreage will put any large proportion of this land into grain crops except perhaps temporarily. Most of them will need and will develop better alternatives for this land. Some of these farmers, possibly many of them, will gradually increase livestock production. And it is quite likely that in so doing they will increase the regional requirements for feed concentrates more than they will increase the production of feed grains. All in all, it would seem that the feed concentrates situation is one which livestock and poultry producers in the Northeast, and in other feed deficit areas as well, should consider more carefully than usual in their planning for the next few years.

M. S. Parsons
Bureau of Agricultural Economics

Farm Fires Hurt Defense Effort

KILL 3,500 A YEAR

With America again the granary as well as the arsenal of democracy, it has become imperative to save farm buildings, storage facilities, and food from destruction by fire, the National Board of Fire Underwriters says.

Fires on farms take an estimated 3,500 lives annually, as well as destroying about \$100,000,000 worth of property.

A large percentage of farm fires result in total or nearly total losses, because the fires are not discovered in time, water supplies are insufficient, or good fire-fighting equipment is too far away.

Fire Safety Program

To reduce the danger of fire on farms and rural properties, the National Board suggests:

1. See that exposed buildings are equipped with lightning rods approved by Underwriters' Laboratories. Lightning is the leading cause of farm fires in most areas.
2. Inspect your lightning-rod system to see that cables are undamaged.
3. Inspect your heating system to make sure it is in good repair. Have rusted smokepipes and cracked chimneys fixed by a competent repairman.
4. Have electric wiring inspected. Avoid "home-made" wiring or temporary installations.
5. Instruct every member of your household in the dangers of using kerosene to start fires in stoves. Be sure that kerosene is used in approved heaters, stoves, or lamps built especially for it.
6. Prohibit smoking in barns, machine sheds, and oil-storage houses.
7. Provide an emergency water supply near a road near your farm buildings. If you build a cistern, be sure it holds at least 3,000 gallons.
8. Cooperate with your neighbors to support a rural volunteer fire department.
9. See that every member of your household knows how to call the fire department without loss of time.

Beltsville White Turkeys— A Fast Growing Enterprise

NOW 16 PERCENT OF ALL TURKEYS RAISED

THE BELTSVILLE small white turkey is delicious and you should eat one to fully appreciate its merits.

In 1934 research workers at the Beltsville Research Center set out to breed a small turkey of good conformation that would be more suitable for use of small families and apartment dwellers than the heavier breeds of turkeys. They succeeded admirably. The new turkey known as the Beltsville Small White was immediately accepted by producers and has shown a steady and rapid gain in numbers.

Large Percent of Total

Beltsville Whites have spread throughout the country. This year they account for about 16 percent of all turkeys raised.

Turkeys of the Beltsville White breed are small and compact, have a broad breast and relatively short legs and neck. At mature market age (24 weeks) the toms average about 15 pounds liveweight and the hens about 9 pounds. In addition to being of good conformation and of desirable weight these turkeys are excellent layers.

Good Layers, Efficient Feeders

The fact that these birds convert feed to meat very efficiently and can be marketed at an early age has made possible their use as fryers or light roasters.

Their laying ability is very important. First of all, a steady supply of hatching eggs must be available in order to furnish turkeys on a year-round basis. Secondly, the cost of the poult is a major production item and a large number of eggs per breeder hen is a must in order to hold down hatching-egg costs. The fact that Beltsville Whites marketed around 16 weeks of

age produce a pound of gain on 2.8 to 3.0 pounds of feed, places them at the top in efficient use of feed.

For Year-Round Market

Producers of Beltsville White poults are keeping abreast of the demand for these birds. Hatcheries are advertising Beltsville White poults on a year-round basis. It is now possible for a turkey grower to make plans on a yearly basis and have his poults delivered on schedule exactly when he wants them.

The turkey fryer or light roaster turkey has been readily accepted by the housewife and bids fair to open up an entirely new market on a year-round basis. These turkeys dress out at about 4 to 8 pounds at 12 to 16 weeks of age. The term "fryer turkeys" is used for want of a better term. Actually most of the so-called "fryer turkeys" are light roasters with only a few of the lighter birds, dressing out around 4 pounds, being used as fryers.

Although Beltsville Whites are well distributed throughout the country, the production of the so-called fryer turkey is still pretty much limited to areas close to the centers of population in the East and on the West Coast.

Big Production in the South

The production of Beltsville Whites, including those marketed under 16 weeks of age and those carried through to 24 weeks, totaled around 8 million birds in 1951. About 3 million of these small whites were produced in the South Atlantic States and accounted for over 40 percent of the turkey production in this area. About 2 million were produced in the West North Central States and slightly more than 2 million in the West. The

North Atlantic, East North Central and South Central States produced around one-half million each.

Increase 55 Percent This Year

The number of the Beltsville small whites produced in 1951 shows an increase of 55 percent from last year. This increase is responsible for about two-fifths of the increase in the total turkey crop this year.

The producer of small whites has several factors that work to his advantage. First of all he has more control over his marketings. Should the market be dull and prices off when his turkeys are ready to go as light roasters at 16 weeks he can raise them out to a full 24 weeks of age. Second, if he sells at 16 weeks or less he can handle 2 or 3 batches a year. Third, he can work up a retail trade to take his turkeys throughout the year rather than on a seasonal basis as heretofore. Fourth, the price differential on size of bird is usually in his favor.

Will Not Replace Big Breeds

The large increase in the production of Beltsville Whites this year is the result of the rapid increase in the turkey fryer industry. Therefore, before jumping into the turkey broiler game with both feet be sure that you will be able to sell them. Talk it over with the manager of your local dressing plant, determine if he is interested and get some idea of the prices you may expect. In other words this is a new industry that is expanding rapidly and markets must be developed to take care of the rapidly increasing production. New producers should move with caution.

The fact that Beltsville Whites are increasing so rapidly does not mean that they will displace the heavier breeds of turkeys. Large families, institutions, restaurants, and hotels need a large bird to meet their needs, so the demand for this type bird is expected to continue. However, the Beltsville White, to a large extent, is finding a new market and should result in a greater per capita consumption of turkeys.

Paul W. Smith
Bureau of Agricultural Economics

Capacity Estimates Ready in December

WHAT LEVEL of agricultural production could we expect to reach by 1955 if needs continue at high levels? And what obstacles are in the way that need to be overcome?

The Land-Grant Colleges and the Department of Agriculture are cooperating in a study to answer these questions. State reports on the analysis of agricultural production capacity are scheduled to be sent in by State committees for summarization by November 1.

Land-Grant College members of the over-all committee assigned to this survey were appointed by officials of the Land-Grant College Association, Department members by the Secretary of Agriculture.

The Washington working group will summarize the data in the State reports. The summary report will include potential needs of production resources and facilities as well as an analysis of production capacity. The assignment calls for a national summary in December.

All Turkeys A Record Crop

Turkeys raised by U. S. farmers this year promise to be a record crop. Nearly 53 million, estimated in September, tops last year's total by 16 percent. The turkey crop includes greatly increased numbers of Beltsville Small Whites as well as the large types.

Farmers who reported in January said they intended to raise only 1 percent more turkeys than in 1950. However, steadily rising turkey prices during the hatching season encouraged farmers to boost their production over last year by about 7 million birds.

Trend is toward early marketings. Farmers' intentions indicate that nearly a third of the turkey crop may be marketed in October or earlier.

How Much Can You Spend on Packing and Grading Potatoes?

Would Keep Costs Down and Consumption Up

During the past few decades producers and shippers have made great strides in handling, grading, and packing potatoes so as to reduce waste prior to shipment to market. Handlers also have had some success in preventing damage during shipment. However, the main thing that producers, shippers, and handlers of potatoes want to know is what circumstances make such practices profitable or unprofitable? Recent marketing research is designed to help get some of the answers.

Prices, Consumption Affected

A basic question facing potato growers is whether it is more economical to get the same quantity of potatoes to consumers through more careful handling or whether extra potatoes should be produced to allow for waste and spoilage due to careless marketing practices.

Greater care in handling, grading, and packing is likely to raise marketing costs. If the retail price of the commodity remains the same, consumers benefit by getting better products at no extra cost. But in such case, producers, handlers, and shippers would have to increase their services without raising their charges. In effect, renderers of these services would get a narrower margin. And such a narrowing of the margin might mean operating at a loss instead of a profit.

Larger returns for handlers and shippers could only come with increased prices or an increase in consumption on the part of the consumers. If consumers could be induced to pay a sufficiently higher price for the commodity, the incentive to the marketing agencies for going to extra expense to improve the grade would be clear. If consumers could be induced to consume more, marketing agencies might protect their returns by handling a larger volume, even though the profit margin per unit

were less. It should be remembered, however, that potatoes must compete with other foods for a share of the market. Therefore, any increase in price might reduce the competitive position of the commodity and result in a decline in consumption.

Care Depends on Value

Studies in some production areas have revealed that when the commodity has a relatively high value greater care in handling and packaging prevails. This would seem reasonable since these processes are costly and time-consuming. There is also some indication, on the other hand, that low prices often result in careless and rough handling, in addition to less effective grading. Experience has proved the value of grading and careful handling as a general proposition. However, it is sometimes possible for them to cost too much.

Studies in retail stores have shown that potatoes that have been washed and cleaned to present an attractive appearance have been able to command a premium in price over other varieties that are dirty and unattractive. Other studies have indicated that in the case of bulk displays of potatoes somewhat better prices are obtainable if the commodity is bright appearing, clean, and relatively free of damage. Sales are doubtlessly influenced by the amount of damage present, if the damage is excessive. However, one study concluded that consumers and the trade have become accustomed to wide variations in quality and accept them without much association between quality and price.

Recent studies at the retail level have shown that more than 50 percent of the grade defects present in potatoes are cuts and bruises which result from

careless and rough handling. If these defects could be eliminated or materially reduced the quality and appearance of the potatoes could be improved and the amount of waste lessened. The question is, would the careful handling required of the marketing agencies to reduce such injuries be profitable?

Problems Faced

To reduce this type of defect in potatoes the following problems would have to be met:

(1) Producers would have to handle their product more carefully, requiring additional time and expense for producing the commodity.

(2) Shippers would have to grade more carefully, thereby increasing their costs.

(3) Handlers would have to spend more time and use more labor to protect the commodity from damage.

(4) Retailers would have to use more care in handling, which would increase their costs.

All of these problems would necessitate moving an additional volume of the commodity or increasing the prices to enable the marketing agencies to maintain their profit. If prices were increased by the additional care, volume might fall . . . to the disadvantage of the shipper. Higher prices might make the product less desirable to the consumer than other competing commodities and result in less potatoes being consumed. Also, additional care in grading, packing, and handling all along the line from the producer to the consumer might increase the quantities of salable potatoes available for consumption from a given crop. This would mean, under the highly competitive marketing conditions that exist, that reductions in prices might be necessary to move all of the crop. The reward to the trade for more careful handling might well be a lower price for a product that costs more to put on the market.

Added Care With Eye on Cost

The producer will profit most if he markets as much of his crop as pos-

sible in the best condition he is able to attain commensurate with costs. Handling agencies will benefit most from the use of reasonable care to prevent waste that results from rough and careless handling. Similar measures are required of the retailer. Waste is costly and it is unthinkable that products which are unfit for consumption should be shipped from producers to retailers, adding the expense of their handling, packaging, grading, and transportation to the cost of marketing the saleable commodity. On the other hand, if additional protective services result in increased retail prices for potatoes, consumers may substitute cheaper competing commodities so that an improvement in quality may result in a drop in consumption.

Generally, it might be said that any improvement in quality or reduction in waste that might be accomplished without greatly increasing costs would be desirable provided it results in some benefit—either better price or increased sales—sufficient to offset the increased cost of producing and handling the commodity. Conversely, any reduction in waste or improvement in quality that decreases the returns to producers and handlers and does not make the product more desirable to the consumer would be difficult to justify.

Price Important to Consumer

No one who visits a modern food store of today, and compares the quality and appearance of the vegetables with what he saw in the average grocery store 20 years ago, will deny that great progress has been made in offering better products to the consuming public. At the same time certain practices can be overemphasized. Producers and sellers who know how far to go in controlling quality and eliminating waste will be more likely to get satisfactory profits than those who do not. In the final analysis the product must appeal to the consumer from both the quality and the price angle.

W. N. Garrott

Bureau of Agricultural Economics

Killing Weeds WITH Chemicals

WEEDS, LONG THE SCOURGE of the farmer, are now being attacked with intensified effort and with new methods, including the use of chemicals which, for controlling weeds, have been used only a very short time. Prior to 1940, weed control measures on farms were practically the same as those used by past generations.

That weeds compete with crops for water, light, and plant nutrients, is common knowledge. Weeds also increase the cost of labor and equipment, reduce the quality of farm products, and often serve as host plants for insects and fungus diseases that attack crop plants. Some weeds are poisonous to domestic animals and to man.

Much has been known, for years past, about weed control. The use of high-quality, clean seed is a sound starting point in any weed-control program. Farmers have long known the importance of seedbed preparation, and of thorough and timely cultivation, in controlling weeds. The hoe and many types of cultivators were primarily designed to destroy weeds. One of the major purposes of rotating crops is to control weeds and in many areas a cultivated row crop is included so that weed competition may be reduced. Even where these "good farming methods" prevail, however, weeds continue to persist.

Supplement Older Methods

During the past 10 years, there have been many new innovations in weed control. More than 100 chemicals have been developed for use in the continuous fight against weeds. Although it is not possible to recommend a specific chemical for every weed or crop, there is a tendency to greatly increase the number of chemicals used, and to use different chemicals for the control of specific weeds under specified conditions.

These chemical weed killers have

been developed primarily to supplement cultural practices, not to replace them.

Today chemicals are being used as supplemental weed control tools for corn, wheat, oats, barley, rice, flax, sorghums, pastures, cotton, peanuts, sugar beets, sugarcane, and others.

New Practices, Much to Learn

Satisfactory chemical weed-control methods have been worked out for such horticultural and vegetable crops as asparagus, carrots, lima beans, onions, parsnips, peas, potatoes, snap beans, sweet corn, strawberries, tree fruits, and many others.

In using herbicides, the farmer is confronted with a new weed-control technique. It is a challenging new farming method which some farmers are learning to master just as they have the many other complexities of modern farming. It might be pointed out here that no large number of farmers, relatively speaking, have yet tried the chemical killers, and there is still much to learn by those who have. Nevertheless, the use of chemicals in controlling weeds will undoubtedly play a larger and larger part in farm production in the years to come.

2,4-D Most Popular Killer

The discovery of the herbicidal properties of plant growth regulating substances greatly stimulated interest in a wide variety of chemicals for weed control. By far, the most widely used herbicide at present is 2,4-D (2,4 dichlorophenoxyacetic acid). The chemical is used primarily as a selective weed killer for the control of broad-leaved weeds in crops tolerant to the herbicide. Thus, it is effectively used for the control of weeds on an extensive scale in corn, small grains, pastures, and hay crops. The chemical may also be used to control annual grasses in certain row crops when used as a preemergence treatment—applied before the crop comes up. Farmers have used 2,4-D largely because it is relatively inexpensive, noninflammable, nonpoisonous and can be applied in low volume sprayers—5 to 10 gallons of water per acre.

While 2,4-D is the most widely used herbicide, uses are now being found for many other chemicals such as 2,4,5-

T; IPC; TCA; and the dinitro compounds. For instance, it is estimated that 50,000 acres or more of cotton in Mississippi were treated preemergence this year for weed control with dinitro compounds. Last year, in comparison, only experimental quantities of the dinitro compounds were used.

Mainly Used in Grain Crops

A recent survey conducted by the Bureau of Agricultural Economics indicates the rapid expansion in the use of 2,4-D for weed control in small grain crops and corn. The survey covering 34 States shows that 17 percent of the acreage of small-grain crops harvested in 1949 were treated for weed control.

These States harvested more than 109 million acres of small grains in 1949, which was about 82 percent of the total. The survey did not include the Southern States and California. (Details in the BAE report, F. M. 88, "Spraying and Dusting Major Field Crops.")

The survey shows that more than 7 percent of the 63 million acres of corn harvested in the reporting 34 States in 1949 was treated for weed control. The total acres of small grain and corn treated for weed control in the 34 States totaled about 23 million acres. Some acreage was treated in the States not included in the survey. So it seems likely that a minimum of 25 million acres of small grain and corn were treated that year for weed control.

Ground equipment was used for about 80 percent of the treated acreage of small grain crops, according to the survey. Airplane equipment was little used for weed control in most of the humid States, because in many instances the small grain fields are small and often are adjacent to fields planted to legumes or other crops that are sensitive to 2,4-D spray drift. Damage from drift material is much greater with airplanes than with ground equipment.

Planes Used in the West

In most of the Plain, Mountain, and Pacific Northwest States around 25 percent or more of the 1949 treated acreage of small grain was sprayed with airplane equipment. In these

States, the small grain fields are often of large size and are adjacent to pastures that are not seriously damaged by spray drift. Definite information is not available, but it is believed that practically all of the corn treated for weed control is sprayed with ground equipment. Most of the corn is treated when the plants are from 6 inches to 18 inches high. At this stage of growth, the plant is less likely to be injured by 2,4-D, than at other stages of growth.

In the application of herbicides it is important that the weeds be destroyed as soon as possible after germination. For small grain crops, most of the acreage is treated in the spring after the plants are well tillered and while weeds are small.

The farmer of today not only finds new herbicides with which to fight weeds but he also has new kinds of sprayers with which to apply them. A decade ago farmers bought around 8 thousand power sprayers annually. Since 1948 they have bought from 60 to 100 thousand of these sprayers annually. Most of the power sprayers bought before 1945 were built for tree fruits. Now the bulk of them are primarily adapted for field crops. Sprayers are used, of course, for fighting insects as well as weeds.

Moreover, many of the modern sprayers are of the low-gallonage type. Low-gallon sprayers take the same quantity of chemicals per acre as other sprayers. But the low-gallon type require much less water and this is a factor of importance, especially in the dry areas where water often must be hauled long distances.

Chemical weed killers have been used but little in the cotton areas, where control of weeds is a much greater problem than in other parts of the country, but limited studies, now under way indicate the possibility of their becoming increasingly important on cotton farms. Farmers in all areas can be expected to use the new methods of weed control when they find them profitable.

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FARM POPULATION DOWN

IN THE LAST 40 years the total population of the United States increased by nearly 60 million and climbed to more than 151 million. The rise was especially rapid in the last decade, due to the high birth rates during and following World War II. Population growth between 1940 and 1950 was about 19 million, compared with an increase of only 9 million in the 1930 decade.

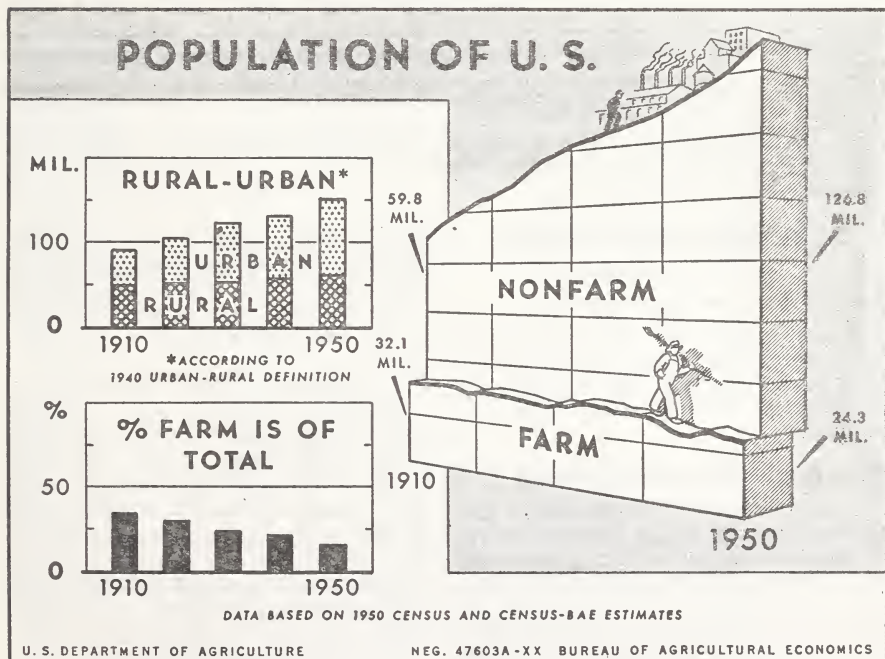
All of the population increase since 1910 has been in the nonfarm population. In contrast, the farm population has declined from 32 million in 1910 to a little over 24 million in 1950. People on farms made up 35 percent of the nation's population in 1910 but are only 16 percent at present.

Farm population was affected by wars and business conditions. From a peak of 32.5 million in 1916, the number of people on farms decreased rapidly during World War I and fairly steadily during the 1920's, to 29.5 mil-

lion by 1930. The great depression cut down on migration from farms, and the farm population increased to 31.2 million by 1933. After that the decline resumed—at first gradually. Movement from farms speeded up during World War II and most of these people did not return after the end of the war. In 1950 the number of persons on farms was about 5 million smaller than in 1940.

In 1950, a farm population a fourth smaller than in 1910, produced the food and fiber for a population that was nearly two-thirds greater than in the earlier year. This was possible only because of the great increases in output per farm worker that have taken place in the last 40 years. Farm mechanization, release of land formerly used for feed crops for workstock, use of fertilizer, improved seed and breeds of animals, and other improved practices brought the gains in labor productivity.

Margaret J. Hagood, BAE



Prices of Farm Products

[Estimates of average prices received by farmers at local farm markets based on reports to the Bureau of Agricultural Economics. A average of reports covering the United States weighted according to relative importance of district and State]

Commodity	5-year average		Sept. 15, 1950	Aug. 15, 1951	Sept. 15, 1951	Effective parity price Sept. 15, 1951 ²
	Base period price 1910-14 ¹	January 1935- Decem- ber 1939				
Basic commodities:						
Cotton (pound)-----	³ 12.4	10.34	39.98	34.60	33.73	33.85
Wheat (bushel)-----	³ .884	.837	1.94	2.05	2.07	2.41
Rice (cwt.)-----	1.97	1.65	4.57	4.82	4.00	5.56
Corn (bushel)-----	³ .642	.691	1.44	1.65	1.65	1.75
Peanuts (pound)-----	³ 4.8	3.55	10.9	10.8	11.0	13.1
Designated non-basic commodities:						
Potatoes (bushel)-----	⁴ 1.12	.717	1.05	1.17	1.23	⁵ 1.80
Butterfat in cream (pound)-----	27.2	29.1	60.9	68.5	68.4	76.7
Milk, wholesale (100 lb.) ⁶ -----	1.70	1.81	4.02	4.45	⁷ 4.60	4.79
Wool (pound)-----	20.1	23.8	65.6	77.1	66.9	56.7
Other non-basic commodities:						
Barley (bushel)-----	³ 6.19	.533	1.14	1.17	1.17	⁵ 1.52
Cottonseed (ton)-----	26.10	27.52	78.80	69.10	66.10	73.60
Flaxseed (bushel)-----	1.67	1.69	3.24	3.11	3.41	4.71
Oats (bushel)-----	³ .399	.340	.728	.759	.775	⁵ .981
Rye (bushel)-----	³ 7.20	.554	1.29	1.46	1.46	⁵ 1.77
Sorghum, grain (100 lb.)-----	³ 1.21	1.17	1.77	2.09	2.12	⁵ 2.97
Soybeans (bushel)-----	1.00	.954	2.26	2.71	2.59	2.82
Sweetpotatoes (bushel)-----	do. .908	.807	1.92	2.73	2.87	2.56
Beef cattle (100 lb.)-----	do. 7.02	6.56	24.60	29.10	29.50	19.80
Chickens (pound)-----	cents. 11.1	14.9	24.5	26.0	25.2	31.3
Eggs (dozen)-----	do. ³ 21.5	21.7	40.4	49.7	55.0	⁵ 52.8
Hogs (100 lb.)-----	dollars. 7.57	8.38	21.30	21.20	19.70	21.30
Lambs (100 lb.)-----	do. 7.71	7.79	25.70	29.80	29.80	21.70
Veal calves (100 lb.)-----	do. 7.84	7.80	27.80	32.60	32.80	22.10
Oranges, on tree (box)-----	do. ⁴ 2.29	1.11	1.23	1.68	1.63	⁵ 3.69
Apples (bushel)-----	do. 1.02	.90	2.38	1.94	2.01	2.88
Hay, baled (ton)-----	do. ⁵ 11.87	11.20	20.30	20.40	21.30	⁵ 29.20

¹ Adjusted base period prices 1910-14, based on 120-month average January 1941-December 1950 unless otherwise noted.

² Parity prices are computed under the provisions of title III, subtitle A, section 301 (a) of the Agricultural Adjustment Act of 1938 as amended by the Agricultural Acts of 1948 and 1949.

³ 60-month average, August 1909-July 1914.

⁴ 10-season average 1919-28.

⁵ Transitional parity, 90 percent of parity price computed under formula in use prior to Jan. 1, 1950.

⁶ Prices received by farmers are estimates for the month.

⁷ Preliminary.

⁸ 60-month average August 1909-July 1914.

OUTLOOK HIGHLIGHTS

(Continued from page 2)

Lower Prices for Some Fruits

Grower prices for most deciduous fruits were expected to average somewhat lower this fall than a year ago. Cranberries, however, may be an exception.

More Apples To Be Sold Abroad

Some rise in price of apples is expected after the winter varieties begin to come to market, as the production of winter apples is smaller this year than last. Larger exports of apples to the United Kingdom also are expected in the 1951-52 season than a year ago

because of a change in British import policy for apples, and exports to various countries will again be facilitated by an export-payment program similar to the 1950-51 program.

Wheat Supplies Relatively Large

Estimates of total wheat supplies after the October 1 crop report were about 1,420 million bushels. Includes a crop of nearly 1 billion bushels, probable imports of feeding quality wheat of about 30 million, plus the carry-over of 395 million. Supplies of this size have been exceeded in only 6 years but reserves may be reduced next summer.

(Continued on page 16)

Economic Trends Affecting Agriculture

Year and month	Industrial production (1935-39=100) ¹	Total income of industrial workers (1935-39=100) ²	Average earnings of factory workers per worker (1910-14=100)	Wholesale prices of all commodities (1910-14=100) ³	Index numbers of prices paid by farmers (1910-14=100)			Index numbers of prices received by farmers (1910-14=100)			
					Com-modities	Wage rates for hired farm labor ⁴	Com-modities, interest, taxes, and wage rates	Livestock and products			
								Dairy products	Poultry and eggs	Meat animals	All livestock
1910-14 average.....	58	50	100	100	100	100	100	100	100	100	100
1915-19 average.....	72	90	152	158	149	147	148	147	153	162	157
1920-24 average.....	75	122	221	160	159	181	168	159	163	121	140
1925-29 average.....	98	129	232	143	151	184	161	161	155	145	152
1930-34 average.....	74	78	179	107	117	121	124	105	94	83	91
1935-39 average.....	100	100	199	118	124	121	125	119	108	117	115
1940-44 average.....	192	236	315	139	148	211	152	169	145	166	162
1945 average.....	203	292	389	154	179	359	189	230	194	207	210
1946 average.....	170	277	382	177	197	387	207	267	197	248	241
1947 average.....	187	330	436	222	230	419	239	272	219	329	287
1948 average.....	192	356	472	241	250	442	259	300	235	361	314
1949 average.....	176	328	478	226	240	430	250	251	219	311	272
1950 average.....	200	369	516	236	246	432	255	247	181	340	278
1950											
September.....	211	396	528	247	252	-----	260	248	196	372	298
October.....	216	405	540	247	253	428	261	261	201	358	296
November.....	215	406	542	251	255	-----	263	267	209	357	299
December.....	218	416	556	256	257	-----	265	272	249	360	311
1951											
January.....	221	416	556	263	262	450	272	286	203	391	323
February.....	221	419	556	268	267	-----	276	285	205	425	340
March.....	222	§ 427	§ 563	269	272	-----	280	280	217	428	343
April.....	223	§ 427	§ 565	268	273	479	283	273	215	428	340
May.....	223	424	§ 563	267	272	-----	283	270	221	418	335
June.....	§ 222	429	569	265	272	-----	282	269	217	422	335
July.....	213	422	563	265	271	475	282	272	222	414	332
August.....	-----	-----	-----	260	271	475	282	277	231	416	336
September.....	-----	-----	-----	-----	271	475	282	283	247	411	337

Year and month	Index numbers of prices received by farmers (1910-14=100)								All crops and live-stock	Parity ratios
	Crops									
	Food grains	Feed grains and hay	To-bacco	Cotton	Oil-bearing crops	Fruit	Truck crops	All crops		
1910-14 average.....	100	100	100	100	100	100	-----	100	100	
1915-19 average.....	193	161	183	175	201	126	-----	171	164	
1920-24 average.....	147	125	189	197	155	157	6 152	162	150	
1925-29 average.....	141	118	169	150	135	146	145	143	148	
1930-34 average.....	70	76	117	77	78	98	104	84	88	
1935-39 average.....	94	95	172	87	113	95	95	99	107	
1940-44 average.....	123	119	241	138	170	150	164	145	154	
1945 average.....	172	161	360	178	228	244	207	203	206	
1946 average.....	201	196	376	237	260	250	182	227	234	
1947 average.....	270	249	374	272	363	212	226	263	275	
1948 average.....	250	250	380	270	351	174	214	252	285	
1949 average.....	219	170	398	245	242	199	201	223	249	
1950 average.....	224	187	402	280	276	200	185	232	256	
1950										
September.....	221	194	428	336	303	217	126	243	272	
October.....	219	188	426	327	300	207	138	238	268	
November.....	224	192	428	346	351	194	188	250	276	
December.....	223	202	436	339	366	202	211	258	286	
1951										
January.....	240	214	442	347	374	192	324	275	300	
February.....	254	222	440	351	379	204	333	283	313	
March.....	245	221	437	359	386	202	265	276	311	
April.....	247	222	438	363	385	209	225	275	309	
May.....	244	223	438	357	380	194	239	271	305	
June.....	240	217	438	353	358	200	189	263	301	
July.....	226	213	438	329	317	175	204	252	294	
August.....	234	215	430	291	294	207	181	244	292	
September.....	223	216	423	283	288	201	161	239	291	

¹ Federal Reserve Board: represents output of mining and manufacturing; monthly data adjusted for seasonal variation.

² Computed from data furnished by Bureau of Labor Statistics and Interstate Commerce Commission on pay-rolls in mining, manufacturing, and transportation; monthly data adjusted for seasonal variation. Revised January 1950. ³ Bureau of Labor Statistics.

⁴ Farm wage rates simple averages of quarterly data, seasonally adjusted.

⁵ Ratio of index of prices received to index of prices paid, interest, taxes, and wage rates. This parity ratio will not necessarily be identical to a weighted average percent of parity for all farm products, largely because parity prices for some products are on a transitional basis. ⁶ 1924 only.

OUTLOOK HIGHLIGHTS

(Continued from page 14)

Processing Truck Plentiful

Total tonnage of important crops for commercial processing was estimated to be more than a fourth larger than last year . . . more green limas, snap beans, sweet corn, green peas, spinach, and tomatoes. Smaller crops are cabbage, beets, and pimientos.

Enough Potatoes to Meet Demand

For the first time in several years, prospective supplies of potatoes are about in line with demand at current prices. Potato farmers cut their acreage this year, and yields per acre are expected to be below last year's record. No price supports are in effect for this year's crop.

More Cotton for Export

Cotton prices moved upward in September after declines in August. The declines reflected the large crop and prospects for a large supply of cotton. The rise in price was caused in part by the removal of restrictions on the quantity of cotton that can be exported and in part by the disposition of farmers to hold their cotton under present market conditions.

World Cotton Supply Up 5 Percent

World cotton supply, 1951-52 season, is estimated at 46 million bales. This is about 5 percent more than the world supply last year; and it is 41 percent more than last year's record world disappearance of 32.8 million bales. No estimate of 1951-52 world cotton consumption is yet possible, but the International Cotton Advisory Committee has estimated a 3-million-bale increase in world stocks this year.

U. S. Supply 19.2 Million Bales

The cotton supply in the United States was estimated in October at 19.2 million running bales. This was based on production forecast of 16.9 million 500-pound bales (about 16.8 million running bales), plus the August 1 carryover of about 2.2 million bales and imports of 200 thousand bales.

Prices Received and Paid

Average prices received by farmers have continued to decline each month

during the past half year; but compared with a year ago they averaged about 7 percent higher in September than September last year. Prices paid by farmers (including interest, taxes, and farm wage rates) continued higher than a year ago. Index at mid-September was up 8 percent from a year ago.

Farm Receipts \$21 Billion (9 Months)

The 21.7 billion dollars that farmers received from marketings in the first 9 months of 1951 totaled 14 percent more than in the same period last year. The upward change was due to higher prices.

Increases Are From Livestock

Cash receipts from crops first 9 months were around 7.6 billion dollars, nearly the same as a year earlier. Receipts from livestock and products in the same period were about 14 billion dollars, 23 percent above the first 9 months of last year.

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